



Docket No. 36390-000101/US

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: JULIO HUATO, ET AL.

GAU: 1616

SERIAL NO: 09/811,610

EXAMINER: CHOI, F.

FILING DATE: MARCH 20, 2001

FOR: METHOD FOR MAKING COLLOIDAL CUPRIC COMPOUNDS

**DECLARATION UNDER 37 C.F.R. §1.132**

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

Sir:

I, JULIO HUATO, declare that:

1. I am a co-inventor of claims 1 -17, 19, 21, and 23 - 25 as currently amended in the present application.
2. I have read the Office Action dated December 13, 2002 and the rejections set forth therein.
3. The gel electrophoresis of cupric tartarate (0.01M) at pH 8 and buffered by 0.05 M tartaric acid and NaOH, the results of which are illustrated in Appendix A attached hereto, was conducted by me or under my direct supervision. In this experiment, the cupric ion was localized by reacting it with ferricyanide ions, which formed an insoluble coffee colored complex.
4. Copper tartarate has the common formula  $\text{Cu}(\text{tartarate}^{2-})(\text{OH})_2$ , which is a compound according to the present invention.

5. In Appendix A, there are no cupric ions located at the origin and all of the cupric ions are located in the middle of the plate and are visible as a wide spot. In electrophoresis, if a soluble cupric ion exists in the solution, the ion will remain at the origin. Thus, since all of the cupric ions are located in the middle of the plate, the copper ion in the cupric tartarate is colloidal and stable.

6. Appendix B is a particle size diagram of cupric tartarate obtained by dynamic small angle X-ray diffraction which shows that the cupric tartarate includes two different particle sizes, 130 nm and 3800 nm. The experimentation was conducted by Prof. Makoto Tadokoro, Department of Chemistry, Osaka City University, Osaka, Japan.

7. Colloidal cupric compounds according to the invention do not fall out of solution and separate into a supernatant and a cupric precipitate. Thus, the inventive colloidal cupric compounds have superior stability.

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

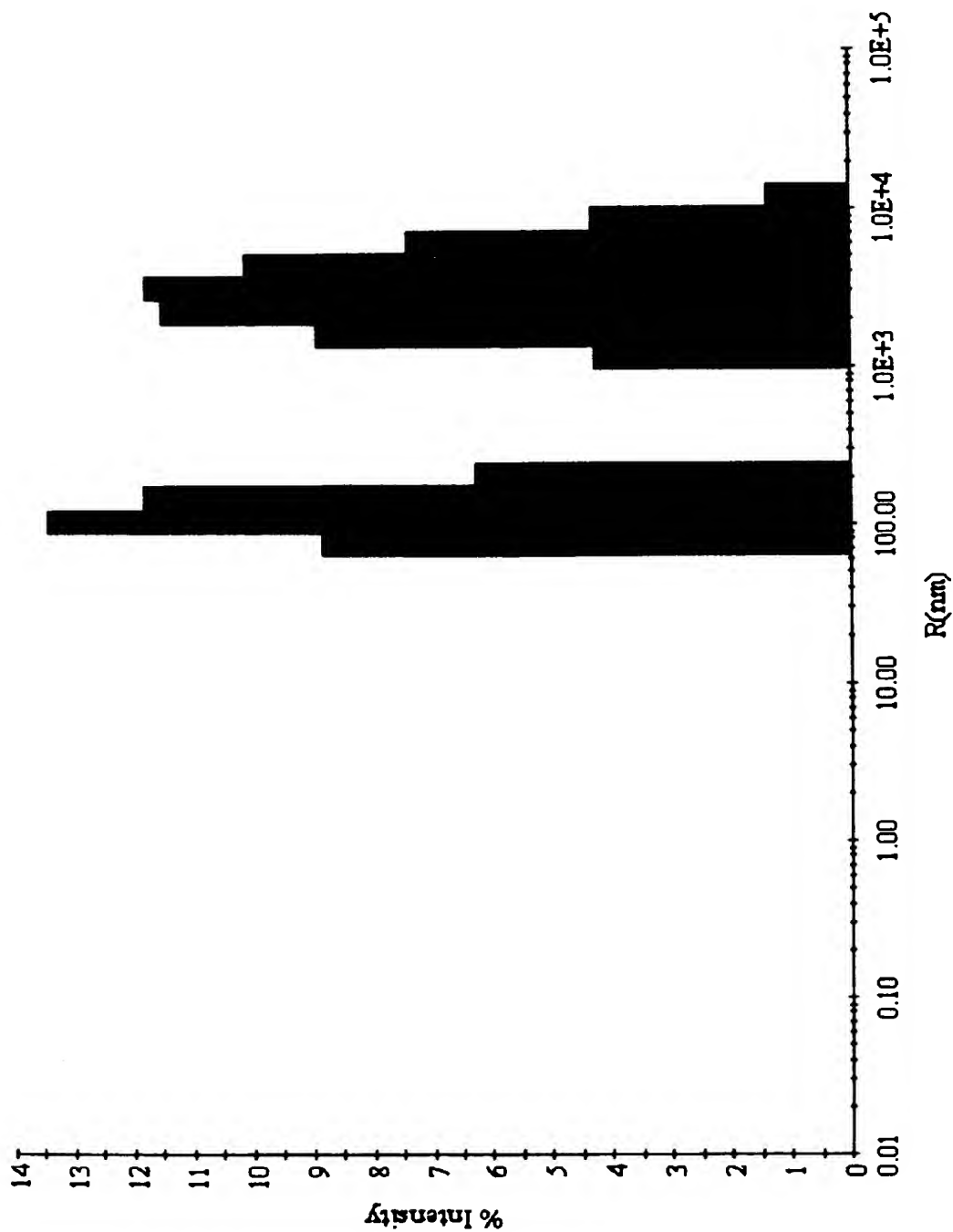
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Julio Huato

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Date

## APPENDIX B



Item	R (nm)	%Pd	MAX-R (kDa)	%Int	%Mass
<input checked="" type="checkbox"/> Peak 1	128.9	34.1	291330	40.4	3.2
<input checked="" type="checkbox"/> Peak 2	3826.6	64.1	813284000	59.6	96.8

## APPENDIX A

### Electrophoresis Cu(trt), 0.01 M

21-08-02

pH 8 buffered by

H<sub>2</sub>trt-NaOH

30 volts

2 hrs

Visualized by

ferricyanate ion

trt = tartrate<sup>2+</sup>

